Weekly report (2012.10.15~10.21)

Done

1) After discuss with Prof. Zhang, we finally decided to analyze the inner structure based on the continuity of the depth of each pixel. And I've made some experiment on this, for each segment(the huge finally image is divided into many segments for parallelization), I choose the pixel with the minimum depth as an initial part and use a stationary threshold to decide whether its four neighbor pixels also belong to this part. Some results is shown below:

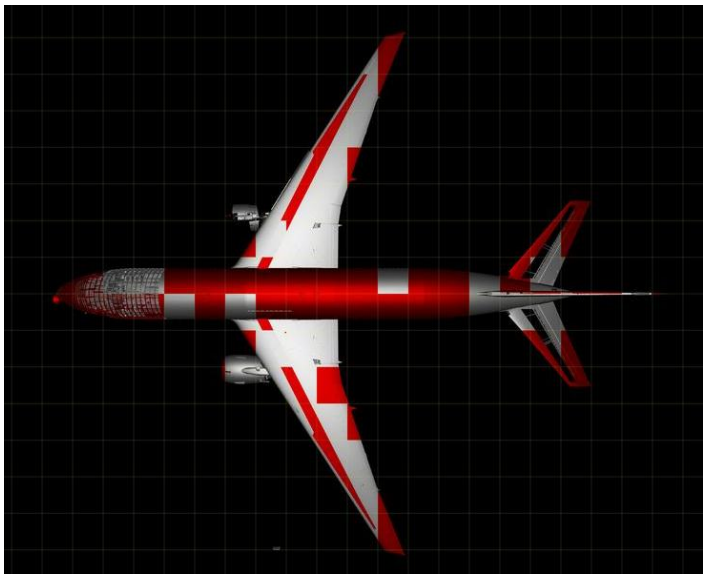

Figure 1 result of the first layer (red stand for the detected part of each segment)

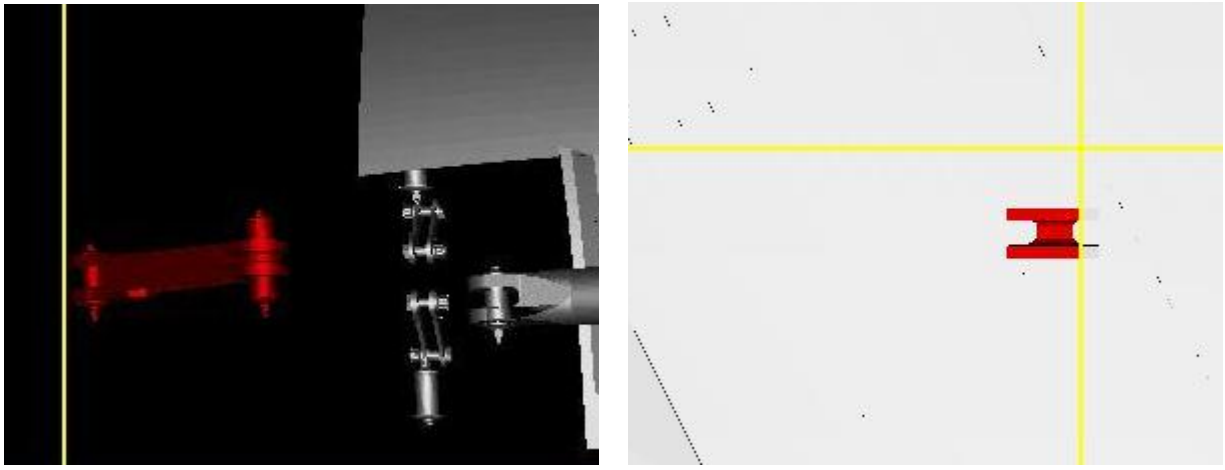

Figure 2 2 parts successfully detected by this method (yellow lines indicates the boundary between segments)

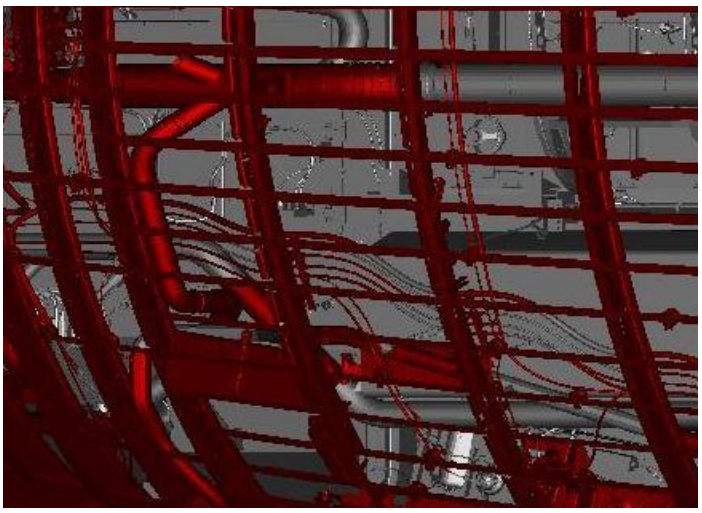

Figure 3 this method shows its disadvantage in some segments

2) After the first experiment, I began to design a better algorithm, which takes the difference in depth of the previous detected pixels in account. The detail and results will be shown in the report next week.

To Do

1) Implement a better algorithm to detect the inner parts of a model.
2) If 1) progresses smoothly, I can make some discussion with two teachers based on my results.